Notebook Series -- Notebooks by Edison and Other Experimenters
Disc Plating Experiments
Notebook, N-20-06-07.2

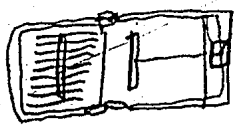
This notebook was used during June-July and December 1920 by Edison, Walter N. Archer, and W. J. Taylor. The entries pertain to the plating processes involved in the manufacture of disc records. The early entries by Edison focus on attempts to copperplate with anodes made from nickel-faced copper molds no longer needed for production. Following these entries are tabular reports of various molds plated in "Bath 3" in June and July with information on the date and time, specific gravity, volts, amps, crock temperature, and other conditions during plating. Notes, suggestions, and instructions by Edison are interspersed throughout the early tables. An additional page of instructions by Edison has been inserted into the book. The entries for December describe unsuccessful efforts to plate a working mold from an actual record. The front cover is labeled "Baths Disc" and is marked "D[3]." The pages are unnumbered. Approximately 80 pages have been used.

Take out No 2
after
826 amp hours
which is about 23 amps
for 36 hours

No 3 Bath **3 BATH**

#A. Anods

A anods
6 disc all cut in
1/4 sections



1 Disc 46 hours 23 average amps
9.5 Volts 1170 Spec Grav 80 Crock Temp
already has been plated out +
removed

2nd Disc put in June

	Volts	amp	Spec G	Crock T
In 12.25 PM 7th June	9½	23	1170	80
1.25	9½	23	1170	85
2.25	9½	23½	1170	82
3.25	9½	23	1170	81
4.25	9½	23	1170	82
5.25	9½	22	1175	81
6.25	9½	22	1175	80
7.25	9½	22	1170	82
8.25	9½	22½	1170	83
9.25	9½	22	1170	83
10.25	9½	23	1170	83
11.2[illegible]	9½	22½	1170	82
June 8.				
12.25 a.m.	9½	23	1170	83
1.25	9½	23	1170	83
2.25	9½	23	1170	83

Bath H 3		Volts	Amps	Spec G	Crucible Temp
3. 25		9½	24	1170	82
4. 25		9½	24	1170	83
5. 25		9½	23½	1170	84
6. 25		9½	24	1170	83
7. 25		9½	24	1170	82
8. 25		9½	23	1175	80
9. 25		9½	23	1175	81
10. 25		9½	22½	1180	87
11. 25		9½	23	1170	81
12. 25 P.M.		9½	22	1175	82
1. 25		9½	17½	1175	83
2. 25		9½	21	1175	83
3. 25		9½	22	1175	83
4. 25		9½	22	1175	80
4.5. 25		9½	21	1175	83
6. 25		9½	21½	1175	81
7. 25		9½	21	1175	82
8. 25		9½	21½	1175	82
9. 25	Calipers	9½	22	1180	82
10. 25	.069.	9½	21	1180	82
11. 25		9½	21	1170	82
12 25		9½	21	1170	83
1. 25	June-9-AM	9½	21	1170	83
2 25	out	9½	21	1170	83

anode broke not plating for 15 minutes while repairing it.

Bath No 3

June 9th AM	S.G.	Volt	Amp	Temp	2nd Disc in 8 AM Ferrous
8.45	1170	9.5	23	80	
9.45	1170	9.5	22½	80	
10.45	1170	9.5	23	81	
11.45	1170	9.5	23	80	
12.45	1170	9.5	23	82	
1.45	1170	9.5	28	82	
2.45	1170	9.5	22	80	
3.45	1170	9.5	22	82	
4.45	1170	9.5	22	83	
5.45	1170	9.5	22	83	
6.45	1170	9.5	22	82	
7.45	1170	9.5	21½	80	
8.45	1170	9.5	21	80	
9.45	1170	9.5	22	80	
10.45	1170	9.5	22	80	
11.45	1170	9.5	22	81	
12.45	1170	9.5	22	82	355
June 10					
1.45 AM	1170	9.5	22	83	
2.45	1170	9.5	22	83	
3.45	1170	9.5	23	83	
4.45	1170	9.5	23	83	
5.45	1170	9.5	23	83	
6.45	1170	9.5	23	83	
7.45	1170	9.5	22	82	
8.45	1170	9.5	23	83	181

No 3 Batch
2nd Disc

861 amp in 39 hours

Out 11.45 P.M. June 10

Bath 3

	S.G.	Volts	Amp	Temp	
9.45	1175	9.5	23	82	
10.45	1175	9.5	22	82	
11.45	1175	9.5	22	82	
12.45	1175	9.5	22	81	
1.45	1175	9.5	22	80	
2.45	1175	9.5	22½	80	
3.45	1175	9.5	22	80	
4.45	1175	9.5	22	80	
5.45	1175	9.5	22	80	
6.45	1175	9.5	21	80	220½ 34 hours
7.45	1175	9.5	21	80	
8.45	1175	9.5	21	80	
9.45	1175	9.5	20½	80	37 hours
10.45	1175	9.5	21	80	
11.45	1175	9.5	21	80	
Out					
June 10 PM		.069	caliper		

June 11 Bath No 3

A M	S.G.	Volt	Amp	Temp	3rd Disc
9.00	1170	9½	19	80	in
10.00	1170	9½	20	81	same Circuit
11.00	1170	9½	20	82	
12.00	1170	9½	20	82	
1.00	1170	9½	20	82	
2.00	1170	9½	20	80	
3.00	1170	9½	20	82	
4.00	1170	9½	20	83	
5.00	1170	9½	20	83	
6.00	1170	9½	20	82	
7.00	1170	9½	20	83	
8.00	1170	9½	20	83	
9.00	1170	9½	20	83	
10.00	1170	9½	20	82	
11.00	1170	9½	20	80	
12.00	1170	9½	20	80	300
June 12					
1.00 AM	1170	9½	20	80	
2.00	1170	9½	20	80	
3.00	1170	9½	20	80	
400	1170	9½	20	81	
5.00	1170	9½	20	80	
6.00	1170	9½	19	80	
7.00	1170	9½	20	80	
8.00	1170	9½	20	81	
9.00 24	1170	9/2	20	83	17 9

Anode broken replaced with Copper wire 6 P.M.

This anode gave 3 deocs .068 thick only 3 to 5 oz left

~~Bath~~ 3 3rd Disc Out 3.30 June-13

857 Amp in 42½ hours at about 20 Amp per hour

June 12 AM

Bath No 3

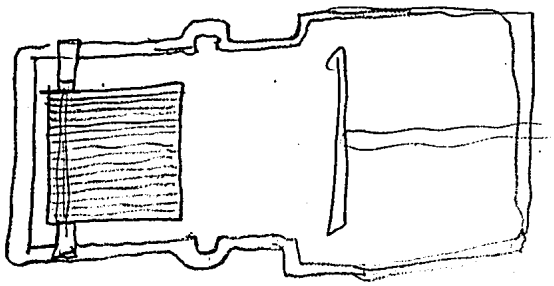
3rd Disc same Anode

~~10.00~~	S.G.	Volts	Amp	Temp	
10.00	1170	9½	19	83	
11.00	1170	9½	18	83	
12.00	1170	9½	18	83	
1.00	1170	9½	18	83	
2.00	1170	9-5	18	83	91
3.00	1170	9-5	17	83	
4.00	1170	9-5	18	82	
5.00	1170	9-5	17	80	
6.00	1170	9.5	20	82	
7.00 eve	1170	9-5	22	83	94
8.00	1170	9.5	23	83	
9.00	1170	9.5	23	83	
10.00	1170	9.5	23	83	69
11.00	1170	9.5	23	81	
12.00 PM	1170	9-5	23	85	
1.00	1170	9-5	23	84	
2.00	1170	9-5	22	84	
3.00	1170	9-5	22	82	
3.30	1170	9-5	11	82	
~~AM~~					OUT
OUT	out	3-30			
~~On~~					

At 3 PM Sunday came down to room & found all the electric lights burning over baths

Another anode — June 13 1920

3 Batt



1/4 sections placed solidly together without washers — no cloth separator used

June 13-

~~Time~~	Volts	Amps	Temp	Temp	Total
6.00	1175	9½	21	82	
7.00	1175	9½	23	83	23
8.00	1175	9½	22	83	45
9.00	1175	9½	22½	83	67
10.00	1175	9½	22	80	89
11.00	1175	9½	22	80	111
12.00	1175	9½	22	80	133
1.00	1170	9½	23	80	156
2.00	1170	9½	23	81	179
3.00	1170	9½	23	82	202
4.00	1170	9½	24	80	226
5.00	1170	9½	23	80	249
6.00	1170	9½	23	82	272
7.00	1170	9½	23	81	295
8.00	1175	9½	22	80	317

Out - 6.00 A.M. June - 15

866 Amp in 36 hours
at about 24 Amp per hour

Bath 3 — 1st anode

June 14

AM	Spec	Volts	amp	Temp	Amp
9.00	1170	9-5	23	83	340
10.00	1170	9-5	23	83	363
11.00	1170	9-5	25	83	388
12.00 PM	1170	9-5	25	83	413
1.00	1175	9.5	25	80	438
2.00	1175	9-5	25	80	463
3.00	1175	9.5	25	80	488
4.00	1175	9-5	25	80	551
5.00	1175	9-5	25	80	538
6.00	1175	9-5	27	80	576
7.00	1175	9-5	26	83	591
8.00	1175	9-5	25½	83	616
9.00	1175	9-5	25½	83	642
10.00	1175	9.5	25	82	667
11.00	1175	9.5	25	82	692
12.00 AM	1175	9.5	25	80	717
1.00	1175	9.5	25	80	742
2.00	1175	9.5	25	80	767
3.00	1175	9.5	25	80	792
4.00	1175	9.5	25	80	817
5.00	1175	9.5	25	80	842
6.00	1175	9.5	24	80	866

Out
36 hours

This is first one from this anode

6.00 AM
866 AMP

No 3
Blanked with Nickel

No 3 2nd Anode in

June 15 AM	SG	Volts	Amp	Temp.	Total Amp
10.30	1175	9½	24	83	
11.30	1175	9½	26	81	26
12.30 PM	1175	9½	26	81	52
1.30	1175	9½	26	81	78
2.30	1170	9½	26	81	104
3-30	1170	9½	26	80	130
4.30	1170	9½	26	80	156
5-30	1170	9½	26	80	183
6-30	1170	9½	25	80	208
7.30	1170	9-5	26	80	234
8-30	1170	9-5	26	80	260
9.30	1170	9-5	27	83	287
10.30	1170	9-5	27	83	314
11.30	1170	9-5	27	82	341
12.30 AM	1170	9-5	27	80	368
1.30	1170	9.5	27	80	395
2.30	1170	9.5	27	80	422
3.30	1170	9.5	27	80	449
4.30	1170	9.5	27	80	476
5.30	1170	9.5	27½	80	503
6.30	1170	9.5	28	80	531
7.30	1170	9.5	28	80	559
8.30	1170	9.5	27	83	586
9.30	1170	9-5	27	83	613

1.30 PM - Lug support
Eat. off at rod.

This anode not a success because Current goes around sides direct to reach rod direct - only safe place would be the Cellar

Doubtful if any good

No 3 2d Disc

June 16

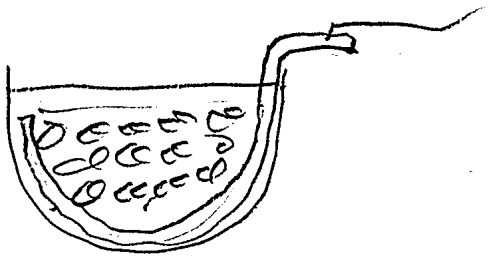
A M	S.Gr.	Volts	Amp	Amp	Total amp
10.30	1170	9½	27	80	640
11.30	1170	9½	27	80	667
12.30	1170	9½	28½	82	695
1.30	1170	9½	30	82	725

27 Out

Anode Abandoned

No 6. Stopped in Bath from 6-15 to 6-20. reason belt was to long
Started to plate roughly

Bath. No. 3 1st disc



This is filled with Copper pieces twisted more than the 16 below - same as others

June 16 PM	Spec.	Volts	amps	Temp	Temp	
6.00	1170	9-5	28	82		
7.00	1170	9.5	25	82	25	
8.00	1170	9-5	27	82	52	
9.00	1170	9-5	27	83	79	
10.00	1170	9-5	27	83	106	
11.00	1170	9-5	27	83	133	
12.00	1170	9.5	27	81	160	
June 14 AM						
1.00	1170	9.5	27	80	187	
2.00	1170	9.5	27	80	214	
3.00	1170	9.5	26	80	240	
4.00	1170	9.5	26	80	266	
5.00	1170	9.5	26	82	292	

notice it goes off a vapor
possible gas coming off
somewhere making
bubbles note 28 amp

No. 8. Temp. in Bath at 10-30
June 17. 114 - Bath. 88 in crock

[illegible]ower off from 12.00 to 12.30
Temp dropped from [illegible] 114 di to 106
[illegible]tarted to plate again got 25 amp at
[illegible] 5 di was getting 28 at 114 in Bath

Bath No-3

June 14 AM	S.G.	Volts	Amp	Temp	T. Amp	
6.00	1170	9-5	27	82	319	
7.00	1170	9-5	26	81	345	
8.00	1170	9-5	26	80	371	
9.00	1175	9-5	27	83	398	
10.00	1175	9-5	28	83	426	
11.00	1175	9-5	28	83	454	
12.00	1175	9-5	25	81	479	Current off
12.30	P.M					" on
1.30	1175	9-5	26	81	505	
2.30	1175	9-5	27	82	532	
3.30	1175	9-5	27	82	559	
4.30	1175	9-5	27	82	586	
5-30	1170	9-5	27	82	613	
6-30	1170	9-5	26	82	639	
7.30	1175	9-5	27	82	666	
8.30	1175	9-5	27	82	693	
9.30	1175	9-5	26	82	719	
10.30	1175	9-5	26	82	745	
11.30	1175	9-5	26	82	771	
12.30	1175	9-5	26	80	797	
June 18 AM						
1.30	1175	9-5	26	80	723	
2.30	1175	9-5	26	80	749	
3.30	1175	9-5	26	82	775	
4.30	1175	9-5	27	80	802	
5.30	1175	9-5	26	80	828	

Bath No 3

June 18 AM	SG	Volts	Amp	Temp	Total	
6.30	1175	9-5	26	80	854	
7.00 37	1175	9-5	26	80	867	Out 37 hours

No 3 1st Disc Out June 18
867 Amp in 37 hours
about 23½ per hour

Basket Anode

Bath No 3 2nd Lice
same amount

June 18.

AM	Sign	Volts	Amp	Temp	Total
1130	1175	9½	21	83	
12.30	1175	9-5	22	83	22
PM 1.30	1175	9-5	22	83	44
2.30	1175	9-5	23	83	67
3.30	1170	9-5	22	84	89
4.30	1175	9-5	22	84	111
5.30	1175	9-5	22	83	133
6.30	1175	9-5	22	83	155
7.30	1175	9-5	22	83	177
8.30	1175	9-5	22	83	199
9.30	1175	9-5	22	83	221
10.30	1175	9-5	21	83	242
11.30	1175	9-5	22	80	264
12.30	1175	9-5	22	80	286
June 19 AM					
1.30	1175	9-5	22	80	308
2.30	1175	9-5	22	80	330
3.30	1175	9-5	22	80	352
4.30	1175	9-5	22	80	374
5.30	1175	9-5	21	80	395
6.30	1175	9-5	21	80	416
7.30	1175	9-5	21	81	437
8.30	1175	9.5	21	82	458
9.30	1175	9.5	21	83	479
10.30	1175	9.5	21	83	500 23

Over

Bath No 3 2nd Lic

June 19 AM	Sbn	Volts	amp	Temp	Total
11.30	1175	9½	21	83	521
12.30 PM	1175	9½	21	83	542
1.30	1175	9½	21	83	563
2.30	1175	9½	23	83	586
3.30	1175	9½	23	83	609
4.30	1175	9½	23	83	632
5.30	1175	9½	23	83	655
6.30	1175	9½	23	83	678
7.30	1175	9½	23	83	701
8.30	1175	9½	21	83	722
9.30	1175	9½	20	83	742
10.30	1175	9½	21	83	763
11.30	1175	9½	21	83	784
AM June					
12.30	1175	9½	21	83	805
1.30	1175	9½	20	80	825
2.30	1175	9½	20	80	845
3.30	1175	9½	20	80	865

Out

Amp in 40 hours 21½ per hour

June - 22 - 10.30 Anode Chamber filled up with copper Bras 3 Ubr Disc

Bath 91c 3. 3 thd Disc in same Anode

JUNE 22 PM	Sln	Volts	Amp	Temp	Total
11.00	1175	9½	19½	83	
12.00	1175	9½	19	83	19
AM June 23					
1.00	1175	9½	19	83	38
2.00	1175	9½	19	80	57
3.00	1175	9½	20	80	77
4.00	1175	9½	20	80	97
5.00	1175	9½	20	80	117
6.00	1175	9½	20	80	137
7.00	1175	9½	20	80	157
8.00	1175	9½	19	80	176
9.00	1175	9½	20	83	196
10.00	1175	9½	20	83	210
11.00	1175	9-5	20	83	230
12.00 PM	1175	9-5	20	83	250
1.00	1175	9.5	20	83	270
2.00	1175	9.5	20	83	290
3.00	1175	9.5	20	83	310
4.00	1175	9-5	20	83	330
5.00	1175	9-5	20	83	350
6.00	1175	9-5	20	83	370
7.00	1175	9-5	20	83	390
8.00	1175	9-5	20	83	410
9.00	1170	9-5	20	83	420
10.00	1170	9-5	20	84	440

No 3 Bath Chamber filled up
Amp - dropped from 19 to 17 Amp
when filled Amp went up to 20 Amp
June 24 - 5.30 P.M

Bath No 3 June 25 - 600 AM
3d Disc Out
864 Amp 43 hours above
20 Amp Per Hour
Sir June 22 - 11.00 P.M
started the second time

Bath No 3 3 Ohd Disc

JUNE-23 PM	Sgr.	Volts	Amp	Temp	Total
11.00	1170	9½	19	83	459
12.00	1170	9½	19	84	478
AM June 24					
1.00	1170	9½	19	84	497
2.00	1170	9½	20	80	517
3.00	1170	9½	21	80	538
4.00	1170	9½	22	80	560
5.00	1170	9½	22	80	582
6.00	1170	9½	23	80	605
7.00	1170	9½	23	80	628
8.00	1170	9½	21	82	649
9.00	1170	9½	21	83	670
10.00	1170	9½	21	83	691
11.00	1170	9½	21	83	711
12.00 PM	1170	9½	21	83	730
start	June-25				
12.00 AM	1170	9½	17½	81	749
1.00 AM June 26	1170	9½	18	82	767
2.00	1170	9½	19	83	786
3.00	1170	9½	19	83	805
4.00	1170	9½	19	83	824
5.00	1170	9½	20	81	844
6.00	1170	9½	20	81	864

12.00 Pul Plating to make Room for Nickel Bath

Out at 864 amh

No 3 Bath 4 Discharge
same anode

JUNE 26 AM	Sln	Volts	Amp	Temp	Total
10.30	1170	9½	18	80	
11.30	1170	9½	18	83	18
12.30	1170	9½	17½	80	35
PM 1.00	1170	9-5	17½	80	53
2.00	1170	9-5	17½	80	70
3.00	1170	9-5	17½	83	88
4.00	1170	9-5	17½	83	105
5.00	1170	9-5	17½	80	123
6.00	1170	9-5	17½	80	139
7.00	1170	9-5	17½	83	157
8.00	1170	9-5	17½	83	173
9.00	1170	9-5	17½	83	190
10.00	1170	9-5	17½	83	208
11.00	1170	9-5	17½	83	225
12.00	1170	9-5	17½	81	243
AM June 27					
1.00	1170	9-5	17½	81	260
2.00	1170	9-5	16	80	276
3.00	1170	9-5	17	81	293
4.00	1170	9-5	17	81	310
5.00	1170	9-5	17	81	327
6.00	1170	9-5	17	81	344
7.00	1170	9-5	17	81	361
8.00	1170	9-5	17½	81	378

No 3. Bath 4th Disem

June 27 AM	Lbs	Volts	Amps	Temp	Total
9.00	1170	9-5	18	83	396
10.00	1170	9-5	18	83	414
11.00	1170	9-5	18	83	432
12.00 PM	1170	9-5	18	83	450
1.00	1170	9.5	18	83	468
2.00	1170	9-5	18	83	486
3.00	1170	9-5	18	83	504
4.00	1170	9.5	18	83	522
5.00	1170	9-5	18	83	540
6.00	1170	9.5	18	83	558
7.00	1170	9-5	17½	83	575
8.00	1170	9-5	17½	83	593
9.00	1170	9-5	17½	81	610
10.00	1170	9-5	17½	81	628
11.00	1170	9-5	18	81	646
12.00	1170	9-5	18	80	664
AM June 28					
1.00	1170	9-5	17	80	681
2.00	1170	9-5	17	80	698
3.00	1170	9-5	17½	81	715
4.00	1170	9-5	17½	81	733
5.00	1170	9-5	17	81	750
6.00	1170	9-5	17	81	767
7.00	1170	9-5	17	82	784
8.00	1170	9-5	17	82	801

hrs 50) 882.0 (17.5

50 × 882 350 280 280

Start June 26, 20. — 10.30 AM
Finish " 28, " — 12.30 A.M.
Total Amps 882
" hours 50
Average Amps. 17.5
#3 tank — last anode
4th " disc.

No 3 Bath 4th disc

JUNE 28 AM	Hrs	Volts	Amps	Amp	Total
9.00	1170	9-5	17½	81	818
10.00	1170	9-5	17	81	835 +
11.30	1170	9.5	17-5	83	852
12.30	1170	9.5	19	80	871 Out
					11
					882

#3 Bath

Date	Sp. Gr	Volts	Amps	Temp	Totals		

Req thick Cop bar, scrap—

Screen. Req Linin

Screen in this Bath was
~~Wash~~ Reg. Brown Color.

Take out 750 amper hours

No 3 Bath 1st Disc in

JULY 3 PM	Hr	Volts	Amp	Amp	Total	
11.00	1165	9-5	16	80		
12.00 AM	1165	9-5	16	80	16	
	July-4th					
1.00	1165	9-5	16	80	32	
2.00	1165	9-5	16	80	48	
3.00	1165	9-5	16	83	64	
4.00	1165	9-5	16	83	80	
5.00	1165	9-5	16	83	96	
6.00	1165	9-5	16	83	112	
7.00	1165	9-5	15	83	130	
8.00	1165	9-5	17½	84	147	
9	1165	9-5	18	84	165	
10	1165	9-5	18	84	183	
11	1165	9-5	18	82	201	
12.00 PM	1165	9-5	18	82	219	
100	1165	9-5	18	82	237	not a nub on
2.00	1165	9-5	17	84	254	
3	1165	9-5	17-5	83	271	
4	1165	9-5	17-5	83	289	
5	1165	9-5	17-5	83	306	
6	1165	9-5	18-	82	324	
7	1165	9-5	18	82	342	
8	1165	9-5	18	81	360	
9	1165	9-5	18	81	378	
10	1165	9-5	18	81	396	23 Hours

Bath No 3

Outside Cal = .055
Inside " = .063

Cleaned up .043

45) 745 (16.5
45 ×
295
270
250
220

Bath No 3 taken out at 10.00 o'clock
July 5. a.m. and nobs tailing with flux
#3 Bath #1 disc.
After cleaning tank free from
grease & foul.
Run total to 750 Amps.
Start July 3, 20. 11 P.M.
Finish " 5.20. 8 P.M.
Total Amps 745
" hours 45
Average Amps. 16.5

No 3 Bath 1st Disc in

JULY 4 PM	Hrs	Volts	Amp	Amp	Total	
11.00	1165	9-5	14	81	413	not a nob on
12.00	1165	9-5	16½	81	429	
AM	July 5					
1.00	1165	9-5	16½	81	446	
2.00	1165	9-5	16	81	462	
3.00	1165	9-5	15½	81	477	
4.00	1165	9-5	15½	81	493	
5.00	1165	9-5	15½	81	508	
6.00	1165	9-5	15½	81	524	
7.00	1165	9-5	15	81	539	
8.00	1165	9-5	15½	81	554	
9.00	1165	9-5	15½	81	570	not a nob on
10.00	1165	9-5	16	81	586	
11.00	1165	9-5	16	81	602	
12.00	1165	9-5	16	81	618	
PM 1.00	1165	9-5	16	81	634	
2.00	1165	9-5	15½	81	649	
3.00	1165	9-5	16	81	665	
4.00	1165	9-5	16	81	681	
5.00	1165	9-5	16	81	697	
6.00	1165	9-5	16	81	713	
7.00	1165	9-5	16	81	729	not a nob on
8.00	1165	9-5	16	81	745	Out

Calliper Cleaned up
043 - not burned .45 hrs
.055 .63

Moulds in #3. edge not rounded off.

Disc. revolves 1½ R.P.M.

205 | 318 | 15.5
205
1130
1025
1050

#3 Bath #2 disc

Start. July 6, 20. — 2. P.M.
Finish. July 7, 20 — 11.30 A.M.
Total Amps = 318
" hours — 20½
Average Amps = 15.5

Bath No 3 disc 2nd in

July 6

P M	Speed	Volts	amp	Temp	Total	
2.00	1165	9-5	14	75		
3.00	1165	9-5	14	80	14	
4.00	1165	9-5	16	53	30	
5.00	1165	9-5	15-5	83	45	
6.00	1165	9-5	15-5	84	61	
7.00	1165	9-5	16	84	77	
8.00	1165	9-5	16	84	93	
9.00	1165	9-5	15-5	84	108	
10.00	1165	9-5	15-5	84	124	
11.00	1165	9-5	16	84	140	
12.00	1165	9-5	15-5	84	155	
AM	July 7					
1.00	1165	9-5	15-5	84	171	
2.00	1165	9-5	15-5	84	186	
3.00	1165	9-5	15-5	84	202	
4.00	1165	9-5	15-5	84	217	
5.00	1165	9-5	15-5	84	233	
6.00	1165	9-5	15-5	84	248	
7.00	1165	9-5	15-5	84	264	
[illegible]	1165	9-5	15	[illegible]	[illegible]	
9—	1165	9-5	[illegible]	[illegible]	[illegible]	
10—	1165	9.5	[illegible]	[illegible]	[illegible]	
11.30	1165	9-5	[illegible]	[illegible]	[illegible]	Out.
1.24						

Added 5 cc general bath dope to plating solution. 11 30 AM.

#3 Bath

3rd disc in.

Start July 7, 20 at 11 30 A.M.

Clock	Sp Gr	Volts	Amp	Temp	Total
11 30 AM	1165	9.5	14.5	82	
12 30	1165	9.5	14.5	82	14
1 30 PM	1165	9.5	14.5	83	29
2 00	1165	9.5	15	83	44
3 30	1165	9.5	15	84	59
4 30	1165	9.5	15	85	74
5 30	1165	9.5	15	85	89
6 30	1165	9.5	15.5	84	105
7 30	1165	9.5	15	84	120
8 30	1165	9.5	15.5	88	135
9 30	1165	9.5	15	83	150
10 30	1165	9.5	15	82	165
11 30	1165	9.5	15	82	180
12 30	1165	9.5	15	82	195
AM	July 8				
1 30	1165	9.5	15	82	210
2 30	1165	9.5	15.5	82	226
3 30	1165	9.5	15.5	82	241
4 30	1165	9.5	15.5	82	257
5 30	1165	9.5	16	82	273
6 30	1165	9.5	16	82	289
7 30	1165	9.5	16	82	305
8 30	1165	9.5	14.5	82	319
9 30	1165	9.5	15	80	334
10 30	1165	9.5	14.5	80	349

23 hrs

#3 Bath

3rd disc.

Date	Sp Gr	Volt	Amp	Temp	Total	
11 30	1165	9.5	15	82	364	
12 30	1165	9.5	15	82	379	
1 30 PM	1165	9.5	14.5	80	393	
2 30	1165	9.5	14.5	80	408	
3 30	1165	9.5	14	80	422	
4 30	1165	9.5	14.5	80	436	
5 30	1165	9.5	15	80	451	
6 30	1165	9.5	15	81	466	
7-30	1165	9-5	15	80	481	
8-30	1165	9-5	15	80	496	
9-30	1165	9-5	15	80	511	
10-30	1165	9-5	15	80	526	
11.30	1165	9-5	15	80	541	
12.30	1165	9-5	14.5	80	[illegible]	
AM July 9						
1.30	1165	9-5	14-5	80	[illegible]	
2.30	1165	9-5	14-5	80	575	
3.30	1165	9-5	14.5	80	589	
4.30	1165	9-5	14-5	80	614	
5.30	1165	9-5	14-5	80	628	
6.30	1165	9-5	15	80	643	
7.30	1165	9-5	14-5	80	658	
8.30	1165	9-5	14-5	80	672	
8.30	1165	9.5	15	78	687	
9.30	1165	9.5	16.5	79	704	Added anode [illegible]

24 Hrs.

added 10 cc gen. bath dose to
copper plate Bob. at 11 AM. July 9,

50 | 755 | 15.1
50 × 9
25
250
50

Start July 7, 20. – 11 30 AM.
Finish " 9, " – 12 30 AM.
Total amps. 755
" hours 50
Average Amp 15.1

#3 Bath 3rd disc.

Date July 9, 20.

Time	Sp. Gr.	Volts	Amp	Temp.	Total	
10 30	1165	9.5	17	80	721	
11 30	1170	9.5	17.5	80	738	
12 30	1165	9.5	16.5	82	755	Cut

Test #2 Copper disc. 8-4 then 80 AMP hours, then wash & put in Cu bath wet. Copper bath for 600 Amp. hours. Then give to Mr Edison to try to peel off if possible

Revolve — for 2 min before Ni plate

8 | 90 | 11.2

#2 Bath Nickel Plate #1 disc
2 R.P.M. on disc. Nickel plate anodes.
Started July 7, 20. — 3.10 P.M.
Finish " 7, 20 — 11.10 P.M.
Total Amps 90
" hours 8
Average Amps. 11.2

#2 Bath

#1 disc. in. Nickel Plate

Started July 7, 20 —

Date	Sp Gr	Volts	Amps	Temp	Total
3.10 PM	1280	9.5	9	82	
4.10	1280	9.5	10	89	10
5.10	1280	9.5	11	92	21
6.10	1280	9.5	11.5	92	32
7.10	1280	9.5	11.5	92	44
8.10	1280	9.5	11.5	98	55
9.10	1280	9.5	11.5	98	67
10.10	1280	9.5	11.5	98	78
11.10	1280	9.5	11.5	98	90

Out
Transfer to #8 Copper plate bath.

Rotate in Ni bath 2 min. put in dip to 80 amp then rotate in copper no current 12 min. to 600 amp hours.

10	120 120	12.

Start July 7, 20 — 12 P.M.
Finish " 8, 20 — 10 A.M
Total amp 120
Average amp. 12.

2 Bath

Start July 7, 20.

2 disc
Nickel plate
Shot anode

Date	Speed	Volts	Amp.	Temp	Total	
12 M	1280	9.5	12	92		
AM	July 8, 20.					
[illegible]	1280	9.5	12	92	12	
[illegible]	1280	9.5	12	95	24	
[illegible]	1280	9.5	12	100	36	
[illegible]	1280	9.5	12	98	48	
[illegible]	1280	9.5	12	98	60	
[illegible]	1280	9.5	12	95	72	
[illegible]	1280	9.5	12	95	84	
8:00	1280	9.5	12	94	96	
9 M	1280	9.5	12	94	108	added 1/2 gallon
10 —	1280	9.5	12.5	94	120	dist H_2O.

No Shummer in Ni Bath

Transfer to #7 Copper plate bath

3 Bath

4th disc.

Date Started July 7, 20

Time	Spec	Volts	Amps	Imp.	Total	Remarks
3 30 PM	1165	9.5	17	81		Balata Test #1
4 30	1165	9.5	17	80	17	
5 30	1165	9.5	17	80	34	Cut No Good Forms threes + knobs.
6 30						
7 30						
8 30						
9 30						
10 30						
11 30						
12 30						

6) 122 (23

#3 Bath

5th disc.

Started July 9, 20

Time	Speed	Volts	Amps	Temp	Total	Remarks
6 PM	1165	9.5	14.5	80		
7	1165	9.5	14.5	80	14	Balata
8	1165	9.5	18.5	80	33	Test #2.
9	1165	9.5	20	80	53	
10	1165	9.5	20.5	80	74	
11	1165	9.5	24	80	98	
12	1165	9.5	24	80	122	Cut out because of tree extended to anode chamber

July 10, 20.

1 A.M.

N.G

Ni Plated disc to 48 Amps
Taken out by night shift
washed common water and let
stand for 6 hours on rack,
was dry when put in copper
bath Mr Edison marked what
seemed like stains
Put in Co bath dry & put with on
after disc was in bath.

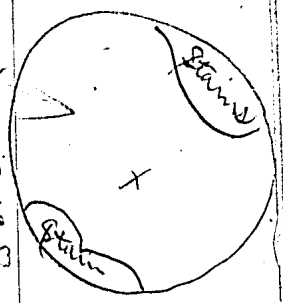
6th disc in

#3 Bath Copper Plate

Start July 10, 20. 9 A.M.

Time	Sp gr	Volt	Amp.	Temp.	Total
9 am	1165	9.5	21	80	
10	1165	9.5	19	80	19
11	1165	9.5	17.5	80	36
12	1165	9-5	17	80	53
1 PM	1165	9-5	17	80	70
2.00	1165	9-5	17	80	87
3.00	1165	9-5	17	80	104
4.00	1165	9.5	17	80	121
5	1165	9.5	17	80	138
6	1165	9.5	16.5	80	155
7	1165	9-5	16-5	80	171
8	1165	9-5	16-5	80	188
9	1165	9-5	16-5	80	203
10	1165	9-5	16-5	80	220
11	1165	9-5	16-5	80	236
12	1165	9-5	16-5	80	253
AM	July 11, 20.				
[illegible]	1165	9-5	16-5	80	26[illegible]
[illegible].00	1165	9-5	16-5	80	2[illegible]
3.00	1165	9-5	16-5	80	303
[illegible].00	1165	9-5	16-5	80	319
[illegible]00	1165	9-5	16-5	80	336
[illegible].00	1165	9-5	16-5	80	352
[illegible]00	1165	9-5	16-5	80	369
[illegible]00	1165	9-5	16-5	80	385

Transfer from #2 Ni bath



10.00 AM Put in more scrap Pieces

#3. Bath

6th Disc in
Stain on Indie

JULY 11 AM	Slm	Volts	Amp	Amp	Total
9-00	1165	9-5	16-5	80	402
10	1165	9-5	18	88	420
11	1165	9-5	17-5	80	437
12 PM	1165	9-5	17-5	80	449
1-00	1165	9-5	17-5	80	465
2-00	1165	9-5	17-5	80	482
3	1165	9-5	18	80	500
4	1165	9-5	18	80	518
5	1165	9-5	18	80	536
6	1165	9-5	17-5	81	553
7	1165	9-5	17-5	81	571
8	1165	9-5	17-5	81	587
9	1165	9-5	17	81	604
10	1165	9-5	17	81	621
11	1165	9-5	16-5	81	637
12 AM	1165	9-5	165	81	654
	July 12				
1-00	1165	9-5	16	81	[illegible]
2-00	1165	9-5	16	81	[illegible]
3-00	1165	9-5	16	81	[illegible]
4-00	1165	9-5	16	81	718
5-00	1165	9-5	16	81	734
[illegible]	1165	9-5	16	81	750
7-00	1165	9-5	16	81	766
[illegible]	1165	9-5	16	81	786

[illegible] 16.7

[illegible] 16.9 AM
[illegible] 12.9 "
Total Amps 802
" hours 48
Average Amps 16.7

#3 Bath

6 disc in
Stain on lid disc

[illegible]	Sp Gr	Volts	Amp	Temp	Total	
9 AM	1165	9.5	16.5	83°	802	Out

192 Amps hi plated

Put in wet.

One Minute

3.6 Amps at the 9th notch

then full current.

Stained when first

put in copper.

) 760 (

~~Total Amps 760.~~

~~11 hours~~

~~Average Amps~~

3 Bath.

Started July 12, 20. – 3 P.M.

Time	Sp gr	Volts	Amps	Temp	Total
3 PM	1165	9.5	16		
4 P.M	1170	9.5	16.5	80	16.
5 –	1165	9.5	18	80	34
6	1165	9.5	17.5	80	52
7	1165	9.5	17	80	69
8	1165	9.5	17	80	86
9	1165	9.5	17.5	81	104
10	1165	9.5	18	83	122
11	1165	9.5	18	83	140
12	1165	9.5	17.5	83	157
	July 13, 20.				
1 P.M.	1165	9.5	18	81	175
2.00	1165	9.5	18	81	193
3.00	1165	9.5	18	81	211
4.00	1165	9.5	18	81	229
5.00	1165	9.5	18	81	247
6.00	1165	9.5	18	81	265
8	1165	9.5	18	82	283
8.00	1165	9.5	18	82	301
9.00	1165	9.5	18.5	82	320
10.00	1165	9.5	17.5	82	337
11.00	1165	9.5	18	83	355
12 –	1165	9.5	17.5	83	372
1 P.M.	1165	9.5	18.5	83	391
2 –	1165	9.5	18.5	85	409

43 | 760 (17.
43 ×
330
331

Total Amp/22 760
" Hours 43
Average Amps 17

3 Bath

July 13, 20.

Time	Sp. Gr.	Volts	Amp.	Temp.	Total
3 PM	1165	9.5	17.5	85	427
4 "	1165	9.5	18	85	445
5 "	1165	9.5	18	85	463
6	1165	9.5	18	80	481
7	1165	9.5	18	80	499
8	1165	9.5	18	80	517
9	1165	9.5	18	85	535
10	1165	9.5	17.5	84	552
11	1165	9.5	17.5	83	570
12	1165	9.5	17.5	83	587
AM	July 14				
1.00	1165	9.5	17.5	83	605
2.00	1165	9.5	18	83	623
3.00	1165	9.5	18	83	641
4.00	1165	9.5	18	83	659
5.00	1165	9.5	18	83	677
6.00	1165	9.5	17	84	694
7.00	1165	9.5	16.5	84	710
8.00	1165	9.5	16.5	83	727
9	1175	9.5	16	80	743
10	1165	9.5	17	81	760

Out

95 Amps in bath
Reversed 2 minutes then current off.

Put in copper bath dry with full current on.

This rise was hanging on rack from in Bath
July 13, 20 — 10. P.M
" 14, 20 — 1. P.M. before putting in copper bath

#3 Bath

Started July 14, @ 1 PM

Time	Sp. Gr.	Volts	Amps	Temp.	Total
1 P.M.	1165	9.5	16	80	
2 P.M	1165	9.5	16	80	16
3	1165	9.5	17	85	33
4	1165	9.5	17	85	50
5	1165	9.5	17	85	67
6	1165	9.5	17	85	84
7	1165	9.5	17	85	101
8	1165	9.5	16.5	85	117
9	1165	9.5	16.5	85	134
10	1165	9.5	16.5	83	150
11	1165	9.5	16.5	83	167
12	1165	9.5	16.5	83	183
July 15, 20,					
1 AM	1165	9.5	16.5	83	200
2	1165	9.5	16.5	83	216
3	1165	9.5	16.5	83	233
4	1165	9.5	16.5	81	249
5	1165	9.5	16.5	81	266
6	1165	9.5	16.5	81	282
7	1165	9.5	16.5	81	299
8	1165	9.5	16.5	81	315
9	1175	9.5	17.5	81	332
10	1165	9.5	17	81	349
11	1165	9.5	17	81	366
12	1165	9.5	16.5	80	383

43) 775 (18.
43 ×
345
344

Total amps = 775
" hours = 43
Average Amps = 18.—

#3 Bath

July 15, 20.

Hour	Sp. Gr.	Volts	Amps	Temp	Total
1	1165	9.5	16.5	80	399
2	1165	9.5	17.5	80	417
3	1165	9.5	17.5	80	434
4	1165	9.5	17.	80	451
5	1165	9.5	17.5	80	469
6	1165	9-5	18	80	487
7	1165	9-5	19	92	506
8	1165	9-5	19	92	525
9	1165	9-5	19-5	93	544
10	1165	9-5	20	92	564
11	1165	9-5	21	92	585
12	1165	9.5	21	90	616

July 16, 20.

Hour	Sp. Gr.	Volts	Amps	Temp	Total
1 AM.	1165	9.5	20.5	90	637
2	1165	9.5	20.5	90	657
3	1165	9.5	20.5	92	678
4	1165	9.5	20.5	92	698
5	[illegible]	[illegible]	[illegible]	91	718
6	[illegible]	[illegible]	[illegible]	92	737
7	1165	9.5	19	93	756
8	1165	9.5	19	90	775

out

43 hr

after 30 min open circuit for 20 min

Put in dry; Copper bath
full current for

#3 Bath

Time	Sp. Gr	Volts	amp	Temp	Total
11 am	1165	9.5	17.5	91	
12	1165	9.5	17.5	91	17
1 P.M	1165	9.5	18.5	89	36
2 -	1165	9.5	19	90	55
3 -	1165	9.5	19	94	74
4 -	1165	9.5	19	90	93
5 -	1165	9.5	18	90	111
6 -	1165	9.5	18	90	129
7 -	1165	9.5	18	88	147
8 -	1165	9.5	18	88	165
9 -	1165	9.5	18	88	183
10 -	1165	9.5	18	88	201
11 -	1165	9.5	18	89	219
12 -	1165	9.5	18	89	237
	July 17, 20.				
1 AM	1165	9.5	17.5	90	254
2 -	1165	9.5	18	90	272
3 -	1165	9.5	18	90	290
4 -	1165	9.5	18	90	308
5 -	1165	9.5	18	90	326
6 -	1165	9.5	17.5	90	344
7 -	1165	9.5	17.5	90	361
8 -	1165	9.5	17.5	93	379
9 -	1165	9.5	18	93	397
10 -	1165	9.5	17.5	95	414

Transfered from
#2 Ni Bath
July 16, 20.
Total amps 137 hi

Total Amp 759
" Watts 43
Average Amp 17 ½

Bath 3#

July 17-20

AM	Volts	Volts	Amp	Temp	Total	414
11.00	1165	9-5	17	98	431	
12-	1165	9-5	17	90	448	
1	1170	9.5	16.5	90	464	
2-	1170	9.5	18	95	482	
3-	1170	9.5	18	95	500	
4-	1170	9.5	18	95	518	
5-	1170	9-5	18	95	536	
6-	1170	9-5	18	93	554	
7-	1170	9-5	18	90	572	
8-	1170	9-5	18	90	590	
9-	1170	9-5	17-5	90	608	
10-	1170	9-5	17	90	625	
11-	1170	9-5	17	89	642	
12-	1170	9-5	17	92	659	
AM	July	18-20				
1.00	1170	9.5	17	92	676	
2.00	1170	9.5	17	92	693	
3.00	1170	9.5	17	92	710	
4.00	1170	9.5	16½	92	726	
5.00	1170	9.5	16½	92	743	
6:00	1170	9.5	16	92	759	Amp 43 Temp

Round Edge

Put in v dry

Revolve 3 minutes, then full current

Put in Co-Zincer dry

full current on

Spec's formed after 5 hrs in Cu, Bath

#3 Bath

Started July 19, 20: at 10 AM.

Time	Sp. Gr.	Volts	Amps	Temp.	Total	
10 am	1165	9.5	15	90	15	
11	1165	9.5	16	94	31	
12	1165	9.5	17	94	48	
1 PM	1165	9.5	17	94	65	
2	1165	9.5	17	92	82	
3	1165	9.5	17	90	99	Transferred from
4	1165	9.5	17	88	116	#1 Tin Bath
5	1165	9.5	17	88	133	July 19, 20. 10 AM
6	1165	9.5	17	85	150	12 Amp. hr. Plate
7	1165	9.5	17	85	167	
8	1165	9.5	15.5	85	182	
9	1165	9.5	15.5	85	198	
10	1165	9.5	15	90	213	
11	1165	9.5	15	92	228	
12	1165	9.5	15	92	243	
July 20, 20.						
1 AM	1165	9.5	16	91	259	
2	1165	9.5	16	91	275	
3	1165	9.5	16	90	291	
4	1165	9.5	16	90	307	
5	1165	9.5	16	90	313	
6	1165	9.5	16	90	329	
7	1165	9.5	16	90	345	
8	1165	9.5	16	90	361	
9	1170	9.5	16	90	377	

38) 616 (16.2
38
236
228
80
76

Total Amps 616
Hours 38
Average amps 16.2

3 Bath

Time	Spgr	Volts	amps	Temp	Total	
10 AM	1165	9.5	16	90	393	377
11	1165	9.5	16.	90	409	
12	1165	9.5	17	95	426	
1 P.M.	1165	9.5	17	93	443	
2	1165	9.5	16.5	89	459	
3	1165	9.5	16	89	475	
4	1165	9.5	16	88	491	
5	1165	9.5	16	88	507	
6	1180	9.5	17	88	526	added 800 cc
7	1175	9.5	18	85	544	H_2SO_4 at 66° B
8	1175	9.5	18	80	562	to stopper bath
9	1175	9.5	18	80	580	at 6 PM July 20, 21
10	1175	9.5	18	80	598	
11	1170	9.5	18	80	616	Out

Tracked Blank No 1 Still Bath

Dec 7, 20

Time	Volts	Amps	Time	Hrs	Remarks
2.30	12	1			
3.30	12.5	1	1	1	Still Bath
4.30	12.5	1	2	2	
5.30	13	1	3	3	Did not cover much
6.30	12.5	1	4	4	over 2nd track
7.30	12.5	1	5	5	granular plate.
8.30	12.5	1	6	6	not Good

Dec 8 20

Still Bath No 2 Tracked Blank.

Am.					
2.30	12.	1			Added 2 c.c. Copper inks.
3.30	9.5	2	1	1	after ½ hour started plating
4.30	9.	2	3	2	on first track
5.30	8.5	2	5	3	After 1 hour started plating on
6.30	9.5	2	7	4	second track.
7.30	9.5	2	9	5	after 1¾ hours started plating
8.30	9.5	2	11	6	on third track
9	10	2	12	7	out.

Better covered all except center 7 hrs.

This was put in at 9.30 to finish as much as possible the plating of the three

Taken out 1.45.

3 Jacked Blank

Dec 9, 20. Still from McMullen.

Time	Volt	Amps	Total	Hrs
"	9.5	1		
1/30	"	1½	½	1
12	"	2	1¼	2
12 30	"	2½	3¼	3
1 PM	"	3	5¾	4
130	8	3½	9¼	5
2	8	4	13¼	6
230	9.	4½	17¾	7
3	9.	5	22¾	8
330	"	6	28¾	9
4	"	6	34¾	10
430	"	7	40¾	
5-	"	8		

Still Birth.

Remarks

added 3cc Copper ink.

Start 1 amp

3/8" covered	1½ Amps.
1" "	2 "
1½" "	2½ "
2" "	3 "
2½" "	3½ "
3" "	4 "
Near Music	4½ "
Music covered	5 "
2" diam to cover	6 "
1" " "	7 "
All covered	8 "

Then raise every 5 Min to 15 Amps.

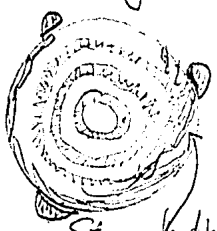
Solution would not carry over 8 Amps.

Crystalline copper plate

4 Cracked Blank
Still Bath

Dec. 15, 20.

Time	Volt	amp	Total	Hours	Resistance Plated	Remarks.
2 PM	10	1				Added 5 cc Copper link
310	"	2		1		
430	"	3		2½		Plated very poor
5	"	4		3		
5N	9	5		3¼		
530	9	10		3½		
630	"	10		4½		
730	"	10		5½		
830	"	10		6½		
930	"	10		7½		
1030	"	10		8½		
11 PM	"	10		9—		



Streaked plate all around edges.

Out

No 5 Tracker Blank.

Time	Volts	Amps	Total	Hours
pm	11.5.	2.		
3.30	11.5.	3.	1	½
4.	11.5.	5.	2½	1.
5	12.5.	5.	7½	2
6	9.5.	5.	12½	3
7	10.	5	17½	4
8	10.	5	22½	5
9	10	5	27½	6
10	10	5	32½	7

8 p.m. All covered except a thin black circular block about 2" from outside of disc

[ITEM(S) FOUND IN BOOK]

Wash well & rinse with distilled water — put in wet —

Put one in 10 minutes 7 Bath

the other 20 minutes before the Current is put on — 4 Bath —

Mark or put in 00 Knob is at Top

The Min No 7 had edge peel for 1" long probably Edge too sharp —